the background. They use camouflage nets and covers extensively to hide, disrupt identification, and conceal armored vehicles. They put up screens, similar to privacy fences, to block observation, and these can be several kilometers long.

The Soviets attempt to use covered and concealed routes and to move at night to limit the effectiveness of ATGM defenses. Minefields and artillery fires placed on these routes can force them into ATGM kill zones, and we must be prepared to fight at night using our night vision devices or other illumination means.

The Soviets use three types of smoke screens to counter ATGMs—blinding, camouflaging, and decoy. They use blinding smoke screens to blind enemy gunners, observation posts, and target acquisition systems, thereby restricting their opponent's ability to engage their forces effectively; camouflage smoke screens to conceal their location, movement, and intentions; and decoy smoke screens to deceive their opponents as to the actual location of their forces and their probable direction of attack.

The Soviets believe that when they conceal their positions with smoke they decrease their opponent's hit probability by 25 percent, and that when they place smoke on an enemy gunner they decrease his hit probability by 90 percent.

Soviet combat vehicles have two methods of producing smoke. Most have a vehicle engine exhaust smoke system that sprays diesel fuel into the exhaust manifold to produce camouflaging smoke to protect a unit during movement. All Soviet armored vehicles have smoke grenade launchers, which provide a rapid means of screening the vehicles. The smoke from these systems interferes with daylight and image intensifier (or starlight) scopes. While thermal sights enable a gunner to see through some smoke, he may not be able to maintain control of his missile through it and may therefore lose it.

Finally, the most effective screening agent is dust kicked up by artillery and tracked vehicle movement; it blocks out thermal, laser, and direct view optics. This dust can become suspended in smoke and restrict the capability of our thermal sights.

• **Combined Arms.** The Soviets fight as a combined arms force. A Soviet motorized rifle battalion is usually reinforced with a tank company, an artillery battery or battalion, and an air defense section. They prefer to fight mounted and assault at 20 kilometers per hour. If they are facing a strong enemy antitank capability, however, they will assault dismounted. In this situation, the infantry dismounts 1,000 meters from the forward edge of the battlefield. The tanks lead moving at six kilometers per hour, followed closely by the dismounted infantry, which engage personnel and antitank weapons. The infantry's BTRs or BMPs follow 100 to 400 meters behind the tanks and fire through the gaps between them. The ZSU 23-4 or 2S6 air defense guns follow about 400 meters behind the maneuver elements.

In addition to all of these ATGM countermeasures, Soviet tanks also have reactive armor. This armor consists of explosive boxes bolted to the outside of a tank and is designed to defeat shaped charge or HEAT munitions. The Soviets began fielding reactive armor on their T-64B and T-80 tanks in 1984. Additionally, the explosion when a missile hits may cause the gunner to believe he has destroyed the target, until it moves and shoots back.

In summary, ATGM training programs must emphasize the use of cover and concealment, counter-reconnaissance (security), and positioning in places where the Soviets are less likely to use artillery or smoke. If smoke is used against a unit or if it is hit by artillery fire, it should move to an alternate position. To improve its survivability, an ATGM unit should plan to destroy entire units at the same time. Finally, ATGM crews must know what their weapons can do and train with those weapons in a realistic environment. Only then will they improve the effectiveness of their missiles.

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Low Intensity Conflict

What Captains Should Study

COLONEL RICHARD T. RHOADES

A couple of years ago while assigned to the Infantry School, we in the Tactics Department wrestled with the question, "What should the captains in the Infantry Officer Advanced Course study about low intensity conflict (LIC)?" At that time we didn't feel we had come up with a satisfactory answer. There were several reasons for our

uncertainty that many others in the Army will find familiar.

After our Vietnam experience, our professional literature put aside the topic of low intensity conflict as we went back to the more dangerous and more clearly defined European threat. There was great disagreement in the defense community as to what LIC really was and what its component elements were. There was not even an agreed upon definition. We also knew that our preparedness to cope with a Warsaw Pact threat had deteriorated during our Vietnam experience and that with President Reagan's help, by gosh, we were going to get that problem fixed before worrying about LIC.

Times have changed, as we all know. Even before the Berlin Wall came down, many realized that we had to study and be well prepared to deal with "military operations short of war." As a result, the Center for Low Intensity Conflict (CLIC) was created, and it has since done a lot of good work in both research and writing. Most significant, however, were the directives stemming from the Goldwater-Nichols Act of 1986 that established an Assistant Secretary of Defense for Low Intensity Conflict and created the U.S. Special Operations Command (SOCOM). Both of these high level actions reflected genuine concern—not only in the Army but also in the Department of Defense and throughout the country—that we had better be ready for low intensity conflict. (Without question, the *Mayaguez* Incident, Desert One, and Grenada also greatly influenced this feeling.)

The bad news in all of this is that LIC remains a broad term that encompasses support for insurgency and counterinsurgency, combatting terrorism, peacekeeping operations, peacetime contingency operations and, most recently, counter-narcotics operations.

The good news is that the Infantry Officer Advanced Course now deals extensively with all categories of LIC and that there are now numerous case studies, articles, and reports—and a few manuals—on the subject. My purpose here is not to offer specific answers but to stimulate the curiosity of junior officers and suggest some areas they might examine as they pursue their professional reading on LIC. The selected readings shown in the accompanying box should get them started. For a thorough study, they can gain a tremendous collection of valuable insights from the cases of Lebanon (both 1958 and 1983), the Dominican Republic, Grenada, and Panama.

My own readings of these and other publications have led me to the highlights that follow, which cover a compendium of issues that captains should examine as they prepare for low intensity conflict.

As in all other military operations, informed actions begin with a good look at intelligence. The key thing to remember in LIC is that there are many sources and indicators to consider that are seldom used in our "conventional" experience. It is amazing, for example, the amount of valuable information that is available in a local library. It is a handy, easily accessible source of generally good information on the culture, geography, and social conditions of little known countries around the world. Obviously, the larger libraries usually have the most current information.

In addition, civil agencies may have invaluable information. Leaders should coordinate with and "collect" from folks like the State Department (the Embassy, once in country) and the Central Intelligence Agency. Local police and armed forces also have a great deal of valuable information, and we must be in constant touch with them.

Leaders should be familiar with the "nature of insurgency," which is spelled out in Field Manual 100-20, Military Operations in Low Intensity Conflict, and which has also been the subject of considerable study by CLIC. Insurgency indicators do not fall into the normal lexicon of intelligence targets.

Since LIC is often conducted in an urban environment, we must learn the unique aspects of urban terrain. For example, what constitutes "key terrain" in an urban environment? Is the high ground in a park as important as a television or radio station?

Another unique area of valuable intelligence is local customs and courtesies. If we are going to enjoy any long term success in LIC, we know that we must "win the hearts and minds" of the people, and customs and courtesies are a part of that process.

Operations in low intensity conflict are almost always constrained by prescribed "rules of engagement" (ROEs). Leaders should become familiar with typical ROEs and understand how and why they are established, along with their positive and negative aspects.

Again almost assuredly, operations in LIC will be conducted in coordination with, or in combination with, local

SELECTED READINGS

Adkin, Mark, *Urgent Fury*, Lexington Books, Lexington, Massachusetts, 1989. The best explanation of what happened in Grenada.

Bolger, Daniel P., *Americans at War, 1975-1986*, Presidio Press, 1988. Operations in "an era of violent peace".

Greenberg, Lawrence M., *United States Army Unilateral and Coalition Operations in the 1965 Dominican Republic Intervention*, U.S. Army Center of Military History, 1987. From a joint and combined arms perspective.

Spiller, Roger J., *"Not War But Like War": The American Intervention in Lebanon*, Leavenworth Papers Number 3, Combat Studies Institute, Fort Leavenworth, Kansas, January 1981. Covers Marines and Army soldiers in Lebanon, 1958.

Yates, Lawrence A., *Power Pack: U.S. Intervention in the Dominican Republic, 1965-1966*, Leavenworth Papers Number 15, Combat Studies Institute, Fort Leavenworth, Kansas, July 1988. The 82d goes in to prevent chaos.

FM 90-8, *Counterguerrilla Operations*, Department of the Army, August 1986. A fascinating mix of operational theory, tactics, and techniques.

FM 100-20, *Military Operations in Low Intensity Conflict*, Department of the Army/Department of the Air Force, December 1989. A good overview of some of the civil-military problems.

forces. Leaders need to understand how that coordination is effected, the best way to conduct liaison, and how local armed forces (or police) should be integrated into our units or operations. All of this is made easier if our units can train with local forces, before and during LIC operations.

Special operations forces (SOF) have unique capabilities and are, in many ways, specifically designed to operate in a LIC environment. Leaders in other types of units must gain an understanding of SOF capabilities and operations. Coordination between SOF and conventional forces is essential, and each can increase the effectiveness of the other.

There is a body of skills a unit needs to conduct successful operations in an urban environment. Urban navigation, for example, includes more than just reading street maps; it involves navigating across rooftops and through storm sewers. Soldiers must also know how to clear and search a building and how to get effective and precise fire support in a city without causing a lot of collateral damage. In a LIC environment, it is even more essential that a commander know who his expert shooters are, because they will frequently be required to engage selected small targets.

Small units are often called upon to operate roadblocks, and there is a way to do this effectively and safely if the leaders think about it beforehand. Arrest and apprehension are skills that are frequently called for in LIC, but not generally found in line units. Although a LIC environment may be technologically unsophisticated, U.S. forces must still exploit their technological advantage. They must know, for example, where to get the power to run their computers and how their computers can help them win in this environment. This technological advantage also means conducting night operations using our night vision devices.

Command and control in LIC presents its own set of new challenges. Perhaps most important is the business of integrating the efforts of different force multipliers on the battlefield. Our leaders must understand the major contributions that such units as Psychological Operations (PSYOPS), Civil Affairs, Military Police, Engineer, and Judge Advocate General make on the LIC battlefield.

In addition to the contribution of SOFs and the requirement for coordination with local forces, leaders must also remember that their efforts in the end must support the efforts of the country team as directed by our ambassador.

Finally, some unusual logistics requirements and solutions will undoubtedly grow out of a LIC operation. These are best and most quickly solved if they are studied in advance.

Population care and control needs particular attention because the real target of operations is a friendly populace. Besides PSYOPS and civil control measures, line units often seem to find themselves involved in such things as looking after public health and sanitation, and providing food and water to the needy. Leaders must decide who will do these things and how. Leaders must also make sure their soldiers know that success may depend as much on how well they treat the local non-combatants as on how effectively they eliminate threat forces.

An examination of our most recent LIC experience, Operation JUST CAUSE in Panama in 1989, reveals some other truly unusual concerns in a LIC environment. Before deploying, soldiers may need some understanding of the vagaries of diplomatic immunity and should be prepared to deal with a broad array of news media representatives. Finally, not unique to LIC but worth studying anyway is the topic of women in combat—how, where, and when they will be employed.

Military operations in low intensity conflict clearly require a new level of sophistication and a knowledge of many tactics and techniques that are entirely new to much of our "conventional wisdom." If recent history is an indicator of the future, all Army leaders need to be ready to operate in this environment. In addition to special operations forces, we have seen our heavy and light, Active Army and Reserve Component conventional forces fully engaged in low intensity conflict. If we are to continue our history of military excellence, we must study and prepare now for low intensity conflict operations.

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